

# newdesign

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## Sense of direction

### Tri again

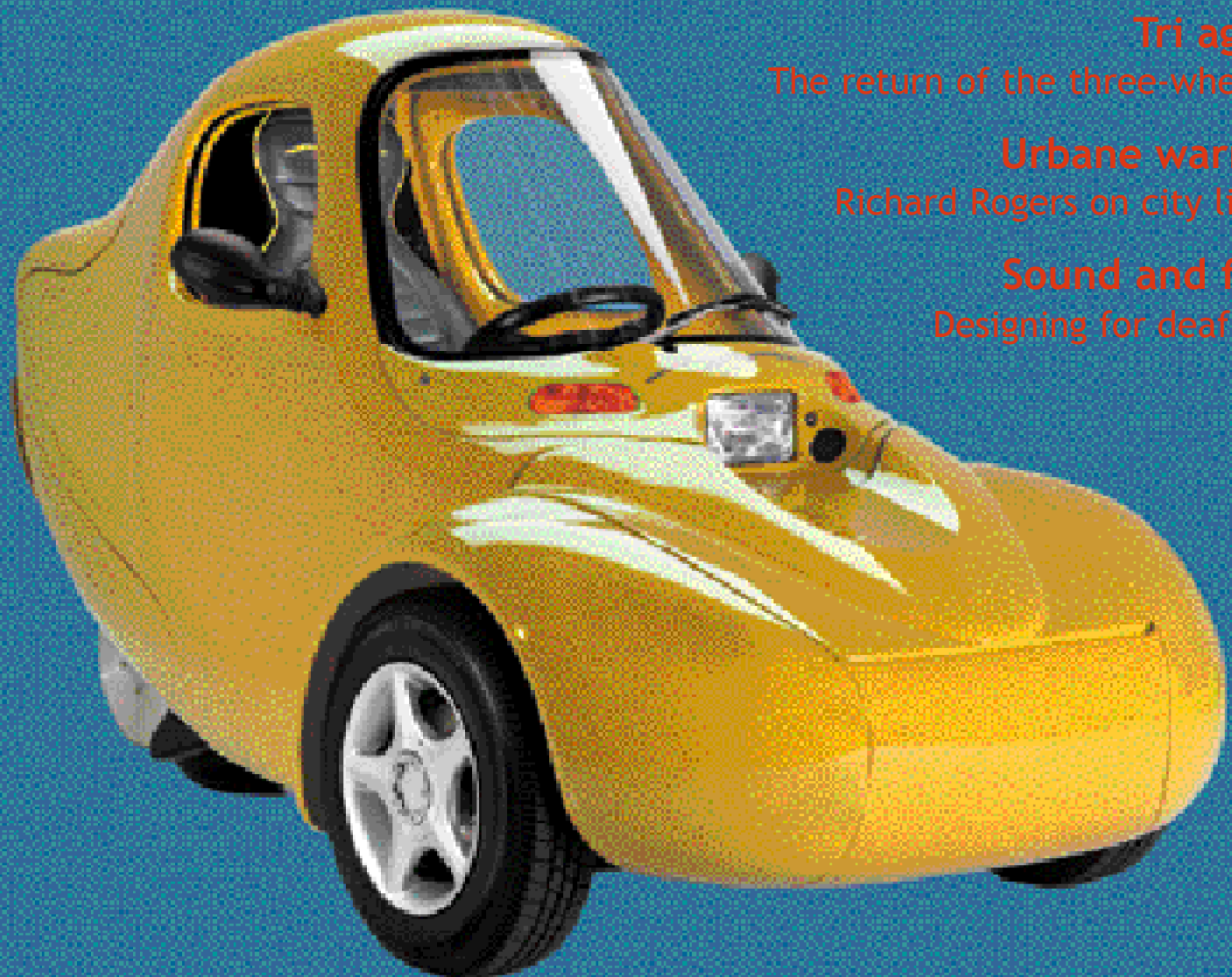
The return of the three-wheeler

### Urbane warrior

Richard Rogers on city living

### Sound and fury

Designing for deafness



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Piers Roberts crashed into the design world as co-founder (with Rory Dodd) of the retail shop 'same' and producer of the annual design-fest Designers Block. Researching new ways of introducing an international audience to up-and-coming furniture and product designers from around the world, they are campaigning for a re-assessment of the way designers reach their market. On page 24, in the first of a new series of articles, he studies the successes of Spanish designers Hector Serrano and Lola Llorca.



Roger Carr is co-director of Radar, a new design, research and development consultancy, with specific focus on the office furniture industry. Using an international network of partnerships, Radar concentrates on complete product development packages, from initial conceptual design to engineering, tooling and manufacturing. On page 52, Carr considers the casegoods market in the US, and wonders what the future has in store for corporate furniture.



**Cover**  
Sparrow by Corbin  
Motors



**Inside back cover**  
Hairdryers courtesy of  
Gita Gschwendtner

The industrial design engineering course at London's Royal College of Art came of age last year. **Nico Macdonald** talks to staff and former students about 21 years of the course and its effects

# The missing link

Taking the well-travelled bus route between London's Knightsbridge and Kensington you pass along the south side of Kensington Gardens, the Royal Albert Hall to your left. This is the northern part of Albertopolis, the largely undeveloped area at the west edge of the expanding city (bordering the venue of the Great Exhibition of 1851), which by Victorian edict became a centre of science and the arts. Opposite Albert's recently restored memorial is the Royal College of Art, itself due for a makeover in the near future. Heading south from the College towards the Science and Natural History Museums and the V&A you pass the Royal College of Organists, with its ornate frontage, before descending the steps to be confronted by the sprawling campus of Imperial College, the UK's original university of applied science and technology.

A gulf would appear to separate Imperial and the RCA, though in fact they have been "nosily looking at each other's washing" since the 1960s, when students such as James Dyson, studying furniture then interior design at the College, would 'gate-crash' lectures at Imperial.

RCA Rector Christopher Frayling recalls the stereotyped counter-position between "long-haired style-merchants" and "white coated engineers with slide rules and skin problems, who listened to heavy metal," but in the real world there was a growing recognition that design and engineering were on converging paths. RCA Professor Frank Height was concerned about the diminished value of engineering, and keen to promote design for need (in the spirit of Victor Papanek), and the synthesis of prototypes in design. He wanted to

**"IDE enabled me to communicate to engineers and manufacturers without being termed a 'fluffy', which is how most designers are treated in industry"**

create a "new cadre of designers" who created designs that were manufacturable and holistic, and products of independent thinking: and he saw a joint course with Imperial as the way forward.

"Year by year, from 1973 onwards," he recalls "I remember trotting down the steps



Home fax 'Light Path' by George Marmaropolous ■ A home fax machine designed to be easy to use for all the family

behind the Albert Hall to go to Imperial College with a package of revised proposals for a Master's degree in design engineering for submission to Senate House in Bloomsbury. Year after year, we were turned down – the course was suspect."

Thinking laterally, Sir Hugh Ford, head of the department of mechanical engineering at Imperial, proclaimed, "Forget the Senate,

**“The main thing I learnt doing the IDE course was that creativity and innovation are the core to good design – or as I say in my studio at the moment: you can’t polish a turd”**

Roy Tam), arrived at both the RCA and Imperial College. Twenty-one years on, there are 38 students in the current year and 274 graduates from the course.

According to Professor John Drane, 90 per cent of its graduates quickly move into a senior position as industrial designers in the companies they go to work for, and many start their own businesses. The graduate diaspora is both geographical and across industry, with alumni going to companies such as Apple, Nokia, Cambridge Consultants and IDEO, others starting consultancies such as PDD and Alloy, and many finding a home from home at Dyson Appliances. “Alumni of the IDE course are designing the world from bases all over Europe, the US, the Far East and Australasia,” claims John Perkins from Imperial’s Engineering Faculty.

The benefits of training in engineering and design are considerable. Jim Orkney, managing director of Kinneir Dufort, observes that “the new product design engineer has to be creative and technically credible and proactive, but also have vision, management, user understanding, business understanding, the ability to work in a team and take a holistic viewpoint.” Gus Desbarats, chair of Alloy Total Product Design, believes his engineering background gave him “an ability to be quite analytical about what we were doing creatively with form,” adding that while “in design culture problems are ‘bad’, the engineering culture is that problems and challenges are there to be met and addressed.” Joe Ferry, industrial design manager at Virgin

why don’t we give the Diploma of Imperial College?” Height’s dream became a reality and Industrial Design Engineering (IDE) was born, inducting engineers into design with a two year course; the first spent learning basics and the final year focusing on one project. In 1980, the first four students (Phil Seeney, Andrew Douglas, Chris Lowe and

Atlantic, comments that “IDE enabled me to communicate to engineers and manufacturers without being termed a ‘fluffy’, which is how most designers are treated within industry.”

The IDE course has developed considerably within Height’s original vision. Drane notes that IDE “began with a design for industry philosophy as the source of the brief,” and has moved to more human-centred “design for society” philosophy. This human-centred approach is eye-opening to people with an engineering background. Desbarats recounts that he “spent four years in a mechanical engineering programme learning a lot about bridges and stresses, and absolutely diddly squat about people.” Observation and understanding of people is a key element in IDE. Senior tutor Prue Bramwell-Davis argues that “often users don’t know what is possible,” and that “in order to design anything of any real value you need to listen to people and look at life from their point of view.”

Creativity and innovation are complementary but equally key aspects of the teaching. One of Drane’s objectives is to “reveal the fundamental creativity within engineers” and he promotes thinking ‘outside the box’ (also the theme for IDE’s anniversary events which included an alumni forum), encouraging students to “undo their assumptions and break through into new areas.” Ferry endorses this approach. “The main thing I learnt doing the IDE course was that cre-

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ativity and innovation are the core to good design – or as I say in my studio at the moment: you can’t polish a turd.”

The great variety of disciplines at the college is a considerable bonus. Kursty Groves, special ventures manager at PDD, remembers “coming from engineering and being stuck in this creative melting pot that is the RCA,” while Mark Sanders, a visiting tutor and principal of MAS



**“If designers aren’t clever, engineers might take over from designers in product innovation”**

Design, reflects on the “opportunities that came from being among all these other designers, ceramicists, textile designers and their thinking methods.” This encourages cross-disciplinary

practice and Ferry has taken the approach to Virgin Atlantic. “In effect what I create is my own mini Royal College of Art,” he says.

Clear, structured thinking underlies the IDE approach, building on students’ engineering training. Graduate Ibrahim Ibrahim points out that “it’s not a course which teaches you how to do a specific thing and design a specific product for a specific sector. It’s a course that teaches you to solve problems creatively and in a structured way.” With this way of thinking “graduates will continue to thrive no matter how the world or technology evolves,” Sanders adds.

Summing up IDE’s approach to design, Drane states that “a product has to be original, have a powerful brief addressing real needs, be manufactured in a sustainable way, within cost constraints, be good to look at and easy to use, and recognise branding aspects of marketed products.”

However, on graduating, Simon Wells (now at PDD), noticed something missing from his skills. “I realised that there was a gap, and the gap was in design implementation.” This he characterises as “that woolly bit that we all wrote about in our major project reports where we gloss over manufacturing and gloss over production and maybe mention something about cost.” Of course, on a two-year programme with no industry placement this is somewhat difficult to address.

Twenty-one years on from the inauguration of IDE, Drane notes that “the somewhat heavy, uncouth engineer has disappeared,” though he still laments the poor public image engineers have in the UK compared to Italy. “People go from engineering into the City or manufacturing,” Groves observes, “but others want to learn more about the creative side of things and products in general.” Gareth Jones, now at Dyson Appliances, reflects how he “started life as a mechanical engineer, working at Rolls-Royce slaving away in the

design studio, looking forward to the next pair of dead men’s shoes so I could move up the ladder.” His apotheosis came when he visited the degree show in 1988. “That confirmed for me that IDE was the missing link.”

Of course, IDE isn’t the only route to creating industrial designers and engineers. As one alumnus notes, “there are lots of people who are industrial design engineers who have never been near the RCA.” Brunel has a well-regarded engineering product design undergraduate course, and although a course at Teesside recently shut up shop, Glasgow School of Art runs joint undergraduate and postgraduate courses with the University of Glasgow. Internationally there are related courses at Stamford University (indeed, IDEO’s Alan South says that the RCA and Stamford are “two establishments absolutely core to our whole business”), and the technical universities of Delft and Eindhoven in the Netherlands, as well as courses in Sweden, Hong Kong and Japan. “UK industrial design studies are more rigorous, especially in the analytical thought that goes into design,” argues Bill Evans, director of San Francisco-based Bridge Design, “but importantly they are steeped in art and culture, hence the value of placing IDE in an art institution rather than a technical one.”

Others make their way without the benefit of an IDE-type course. Kevin McCullagh of Seymour Powell Foresight, whose background was in engineering but didn’t have a design foundation, found that the Design for Industry course at the University of Northumbria was willing to make an exception for him. Fellow student Mark Delaney, who didn’t have an engineering background, comments that “we were taught enough to ask the right questions.”

**In fine engineering-speak, John Drane notes that many graduates’ “exit direction is very different from their entry vector”**

While training engineers in design has a clear logic, does the reverse make sense? “I have met many designers who are brilliant engineers but are hindered by not being qualified,” observes Sanders. Conversely, Nina Warburton of Alloy Total Product

H20T1 Kettle by Stephen Davies | A plumbed-in kettle to prevent accidents



Design, and a Design for Industry graduate, has come across “product designers who know so little about engineering that they are dangerous.” Designers “need to know who to ask what questions and how to evaluate the answers,” she explains. Drane is of the view that there should be a course for art school based designers to enhance their

**“It was actually relatively easy to be an IDE student. We had to meet three basic criteria: does it work? Can it be made? Is it appealing? The demand for skills has increased as the course has evolved, not only to meet these skills but also to address how design as an industry has evolved”**

engineering skills, but for the time being for IDE qualified design engineers will be coming from engineering not design. “If designers aren’t clever, engineers might take over from designers in product innovation,” notes IDE research fellow Rob Holdway, wryly.

IDE graduates appear to land in a wide variety of roles, partly due to the way of thinking the course promotes. In fine engineering-speak Drane notes that many graduates’ “exit direction is very different from their entry vector.” “I can guarantee you can put an IDE student in any bit

of a business and they would be able to tackle that job and add value,” contends Gareth Jones.

Coming from an engineering background, there might be tendency for graduates to find themselves in more engineering roles or, as a graduate from a related course puts it, “Dyson slaves”. This might be expected: as Warburton points out, “75 per cent of jobs in the design industry *are* grunt jobs,” adding that IDE graduates “might take on more methodical roles because that is their disposition.” Delaney, now at Samsung Design Europe, observes that such graduates “tend to end up at design companies that sell a CAD system rather than design-led companies like tangerine and TKO”.

The world of product design has changed a lot over 21 years of IDE and the course has adapted to many of the changes. Reflecting on the early days of the course, Mark Sanders points out that “it was actually relatively easy to be an IDE student. We had to meet three basic criteria: does it work? Can it be made? Is it appealing? The demand for skills has increased as the course has evolved, not only to

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